



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

AD

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

08/952,990 04/09/98 LEIJON

MM32/0713

JOHN P DELUCA
WATSON COLE GRINDLE WATSON PLLC
10TH FLOOR
1400 K STREET NW
WASHINGTON DC 20005-2477

EXAMINER

M 70556-2/8238

ART UNIT	PAPER NUMBER
----------	--------------

ENAD, E
DATE MAILED:

2834

07/13/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/952,990

Applicant(s)
Leijon et al.

Examiner
Enad, Elvin

Group Art Unit
2834



☒ Responsive to communication(s) filed on Apr 9, 1998

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1, 2, 5-8, 11, 13, and 15-51 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1, 2, 5-8, 11, 13, and 15-51 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 2834

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. Moreover, the specification is objected to since it fails to describe figure 6. Correction is required.

Claim Rejections - 35 USC § 112

2. Claims 1,5,6,15,16,19,23,25,29,43 and 45 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1,5,6, etc. reference to the installation as having “no intermediate transformers and/or reactors” does not constitute a positive limitation. Moreover in claims 5 and 6, reference to “the AC/DC rectifier” and “DC/AC inverter” is lacking proper antecedent basis.

In claim 15, reference to “the cable” is lacking proper antecedent basis. In claim 16, use of the term “substantially” makes the claim vague since there is no means of determining how much the potential of the layer needs to be substantially the same to the conductor. A similar language is found in claims 19,43 and 45.

In claim 23, reference to “the stator and/or the rotor” is lacking proper antecedent basis. In claim 25, the electric field of the machine outside the layer and the coil-end region being “near

Art Unit: 2834

zero” is vague. In claim 29 reference to “the slots” is lacking proper antecedent basis.

Appropriate corrections are required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 32,33 and 34 rejected under 35 U.S.C. § 102(b) as being fully anticipated by Hendershot (USP 5,111,095).

Hendershot as seen in figures 4a-4c, discloses a polyphase switched reluctance machine comprising a stator having multiple windings wound with either three, four or five phases and having a radial air gap between the rotor and stator.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1,2,5-8,11 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant Disclosed Prior Art Figure 2 in view of Muelleman (USP 5,666,255).

Art Unit: 2834

Applicant disclosed prior art figure 2 discloses the claimed invention except for a teaching of having a transformerless power distribution system.

Muelleman discloses that it is known to have a power distribution system capable of suppressing transient impulses without using a transformer in the system.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the arrangement of Muelleman and to have modified the device as taught by applicant in figure 2 since such a modification according to Muelleman in column 2, lines 39-60 would provide a system which is of simple design, increased reliability and has lower cost in manufacturing.

7. Claims 15-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant Disclosed Prior Art Figure 2 in view of Muelleman (USP 5,666,255) and further in view of Elton et al. (USP 5,036,165).

Applicant disclosed prior art figure 2 and Muelleman disclose the claimed invention except for utilizing a cable in the electrical machine having conductors with semiconducting properties.

Elton et al. teach that it is known to have an electrical cable comprising an internal grading layer of semi-conducting pyrolyzed glass fiber layer in electrical contact with the cable conductor. In another form of embodiment, Elton et al. teach an electrical cable provided with an exterior layer of internal grading layer of semi-conducting pyrolyzed glass fiber layer in contact with an exterior cable insulator with a predetermined reference potential.

Art Unit: 2834

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the cable assembly of Elton et al. to the device as disclosed in prior art figure 2 since such a modification according to Elton et al. would provide a conductor which prohibits the development of corona discharge.

8. Claims 21-31 and 35-51 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hendershot (USP 5,111,095) in view of Elton et al. (USP 5,036,165).

Hendershot discloses the claimed invention except for utilizing a cable in the electrical machine having conductors with semiconducting properties. Hendershot discloses a polyphase switched reluctance machine comprising a stator having multiple windings wound with either three, four or five phases and having a radial air gap between the rotor and stator.

Elton et al. teach that it is known to have an electrical cable comprising an internal grading layer of semi-conducting pyrolyzed glass fiber layer in electrical contact with the cable conductor. In another form of embodiment, Elton et al. teach an electrical cable provided with an exterior layer of internal grading layer of semi-conducting pyrolyzed glass fiber layer in contact with an exterior cable insulator with a predetermined reference potential.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the cable assembly of Elton et al. to the device as disclosed in prior art figure 2 since such a modification according to Elton et al. would provide a conductor which prohibits the development of corona discharge.

Art Unit: 2834

9. In regard to forming the semiconducting layer with the same coefficient of thermal expansion as that of the insulation layer, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have formed these layers with similar coefficients since it was known in the art that the expansion rate of the two layers would be the same and this is desirable in order to prevent cracking of the insulation and wear between the two.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elvin Enad whose telephone number is (703) 308-7619.

12. Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-1782. The fax phone number for this Group is (703) 305-3431 (32).



Elvin Enad
Primary Examiner
Art Unit 2834
07.08.99